IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Koen DeForche

SERIAL NO.:   10/601,517   GROUP ART UNIT: 2661

FILED: January 22, 2004   EXAMINER:

FOR: Method and Apparatus for
               Fair Queueing of Data
               Packets.   ATT'Y DOCKET: TRA-EAS-007

Honorable Commissioner of Patents
   and Trademarks
Washington, D.C. 20231

Sir:

SUBMITTAL OF
DOCUMENTS PURSUANT TO DUTY OF DISCLOSURE

Pursuant to applicant's duty of disclosure 37 CFR Section 1.56, enclosed is a completed form PTOL-1449 which lists the documents relating to the above-referenced patent application. Since this document submittal is being presented prior to the first examination on the merits, no fee is due herewith.

Attached are the following articles:

"Start-Time Fair Queueing: A Scheduleing Algorithm for Integrated Services Packet Switching Networks", by Pawan Goyal, Harrick M. Vin and Haichen Cheng, 1997 IEEE. Discloses an SFQ algorithm that is computationally efficient and achieves fairness regardless of variation in a server capacity.

"A Self-Clocked Fair Queueing Scheme for Broadband Applications"by S. Jamaloddin Golestani, 1994, IEEE discloses an efficient fair queueing scheme which is feasible for broadband implementation and its performance.

"Analysis and Simulation of a Fair Queueing Algorithm" by Alan Demers, Srinivasan Keshav and Scott Shenker, Computer Communication Review Vol.19,No.4,September, 1989, pp. 1-12, discloses gateway queueing algorithms and their role in controlling congestion in datagram networks.

"Virtual Clock: A New Traffic Control Algorithm for Packet Switching Networks" by Lixia Zhang, discloses a challenging research issue in high speed networking and how to control the transmission rate of statistical data flows.

"WF Q: Worst-case Fair Weighted Fair Queueing" by Jon C.R. Bennett and Hui Zhang, discloses that discrepancies adversely effect many congestion control algorithms that rely on services similar to those provided by GPS (Generalized Processor Sharing).

"Implementing Scheduling Algorithms in High-Speed Networks" by Donpaul C. Stephens, Jon C.R. Bennett and Hui Zhang, discloses techniques to reduce both types of complexities for networks for both fixed and variable size packets.

"Hardware-Efficient Fair Queueing Architectures for High-Speed Networks" by Jennifer L. Rexford, Albert G. Greenberg and Flavio G. Bonomi, discloses a collection of self-clocked fair queueing (SCFQ) architectures amenable to efficient hardware implementation in network switches.

"Efficient Fair Queueing using Deficit Round Robin" by M. Shreedhar and George Varghese, SIGCOMM 1995, ACM 1995, discloses a new approximation of fair queuing, that is called Deficit Round Robin.
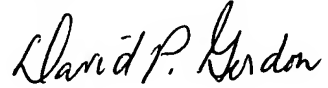
"Fair Scheduling with tunable latency: A Round Robin Approach" by Hemant M. Chaskar and U. Madhow, supported by the U.S. Army Research Office, discloses an alternative and lower complexity approach to packet scheduling, based on modifications of the classical Round Robin scheduler.

The listed documents are brought to the Examiner's attention because they are known to the applicant and/or the applicant's attorney and may be considered by the Examiner to be material to his/her examination. This listing should not be construed as representation that a search has been made or that no better art exists. No inference should be made that the documents are in fact material merely because they are referenced herein. Moreover, no representation is made that the brief descriptions of the references herein necessarily describe the most material aspects of the references.

Further, by this listing, the applicant is not making any admission regarding the relative dates of the invention and listed disclosures.

Respectfully submitted,

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INFORMATION DISCLOSURE CITATION		Applicant Koen Deforche	
PAGE 1 OF 1		Filed June 23, 2003	Group 2661

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	A	"Start-Time Fair Queueing: A Scheduling Algorithm for Integrated Services Packet Switching Networks", by Pawan Goyal, Harrick M. Vin, and Haichen Cheng. Vol. 5, No. 5, October 1997, IEEE	
	B	"A Self-Clocked Fair Queueing Scheme for Broadband Applications", by S. Jamaloddin Golestani, Bellcore, 1994 IEEE	
	C	"Analysis and Simulation of a Fair Queueing Algorithm" by Alan Demers, Srinivasan Keshav, Scott Shenker, Computer Communications Review Vol. 19, No. 4, Austin TX, September, 1989, pp.1-12	
	D	"Virtual Clock: A New Traffic Control Algorithm for Packet Switching Networks" by Lixia Zhang, 1990 ACM	
	E	"WF Q: Worst-case Fair Weighted Fair Queueing" by Jon C.R. Bennett, FORE Systems, and Hui Zhang, School of Computer Science, Carnegie Mellon University	
	F	"Implementing Scheduling Algorithms in High-Speed Networks", Donpaul C. Stephens, Jon C.R. Bennett, Hui Zhang ; sponsored by DARPA	
	G	"Hardware-Efficient Fair Queueing Architectures for High-Speed Networks" by Jennifer L. Rexford, Albert G. Greenberg and Flavio G. Bonomi	
	H	"Efficient Fair Queuing using Deficit Round Robin" by M. Shreedhar and George Varghese, SIGCOMM 1995, Cambridge, MA , ACM	
	I	"Fair scheduling with tunable latency: A round robin approach", Hemant M. Chaskar and U. Madhow. Supported by the U.S. Army Research Office under grant DAAH04-95-1-0246	

EXAMINER	DATE CONSIDERED